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E01F 8/00

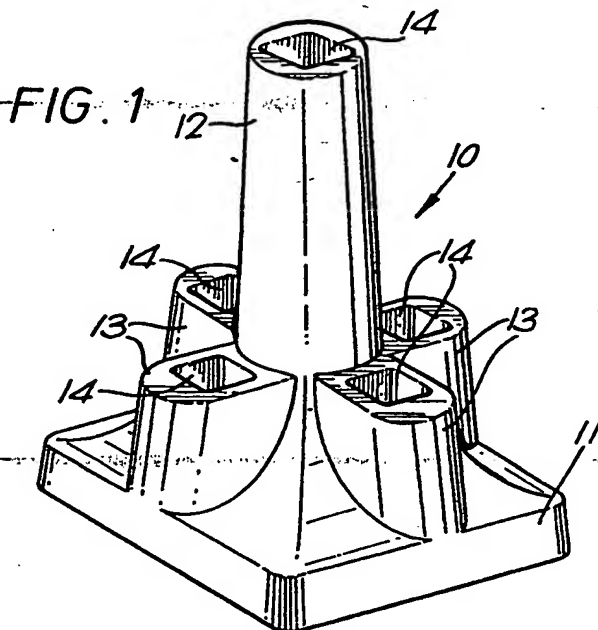
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GB 2093013 A GB 2051932 A US 3809007 A

(58) Field of search
UK CL (Edition J) E1G
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(54) Portable warning marker

(57) A portable warning marker 10 comprises a base portion 11, an upstanding frusto-conical portion 12 and upstanding portions 13 of less height than the portion 12, the upper end of the portions 12, 13 being provided with hollow portions 14 for mounting accessories thereon, such as extension members, lamps, barrier supports or signs.



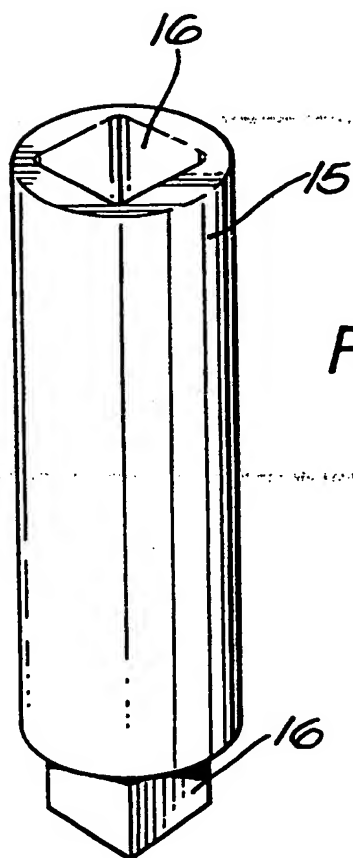
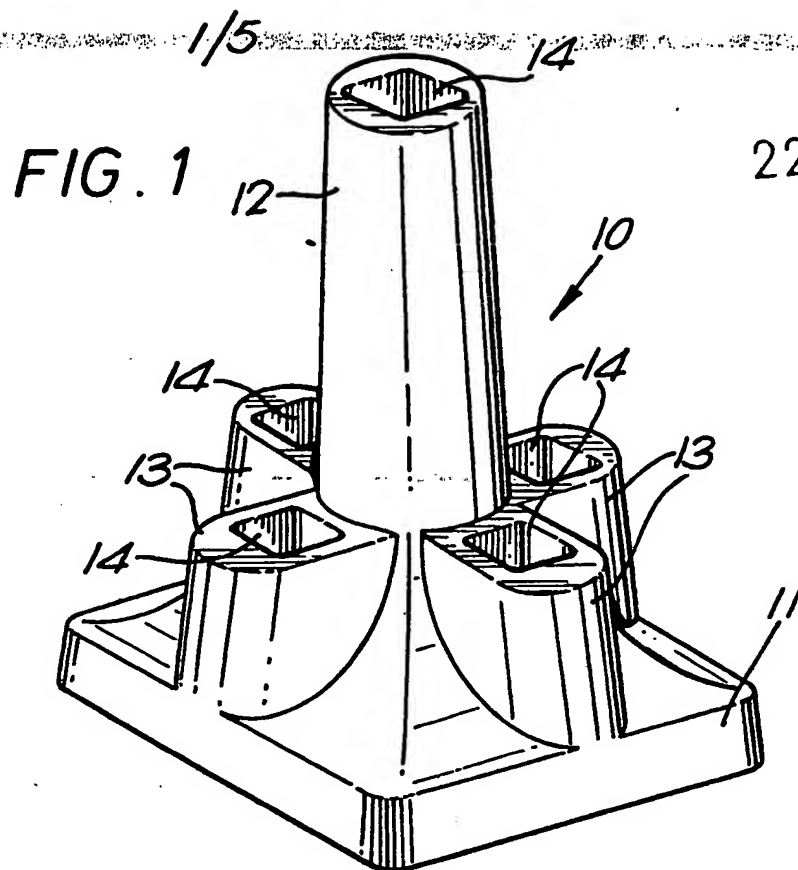


FIG. 3

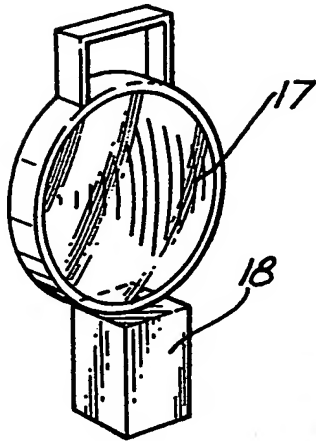


FIG. 4

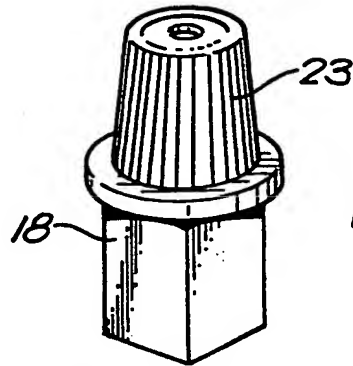
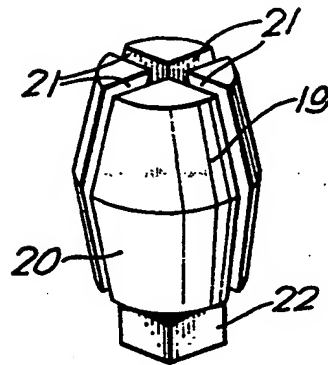


FIG. 5

FIG. 6

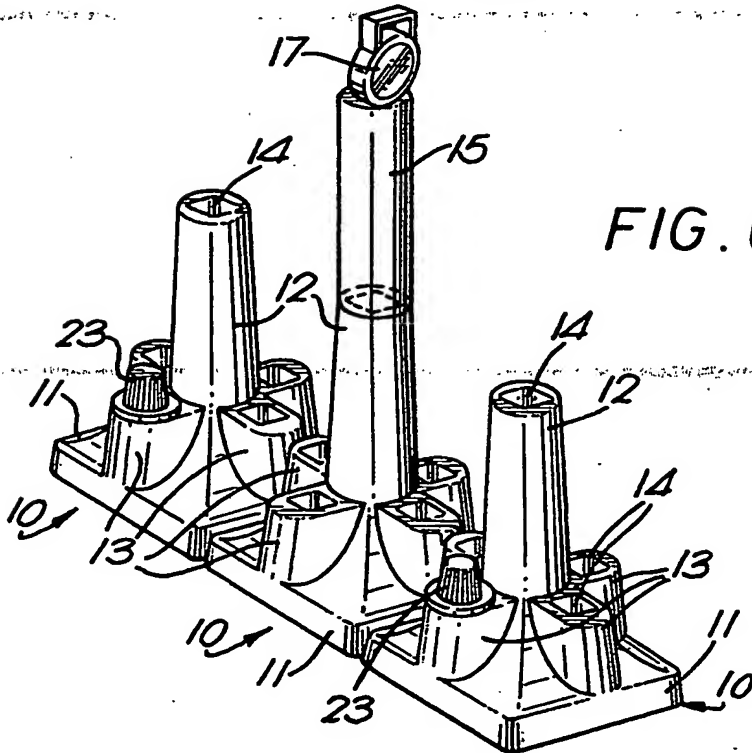


FIG. 7

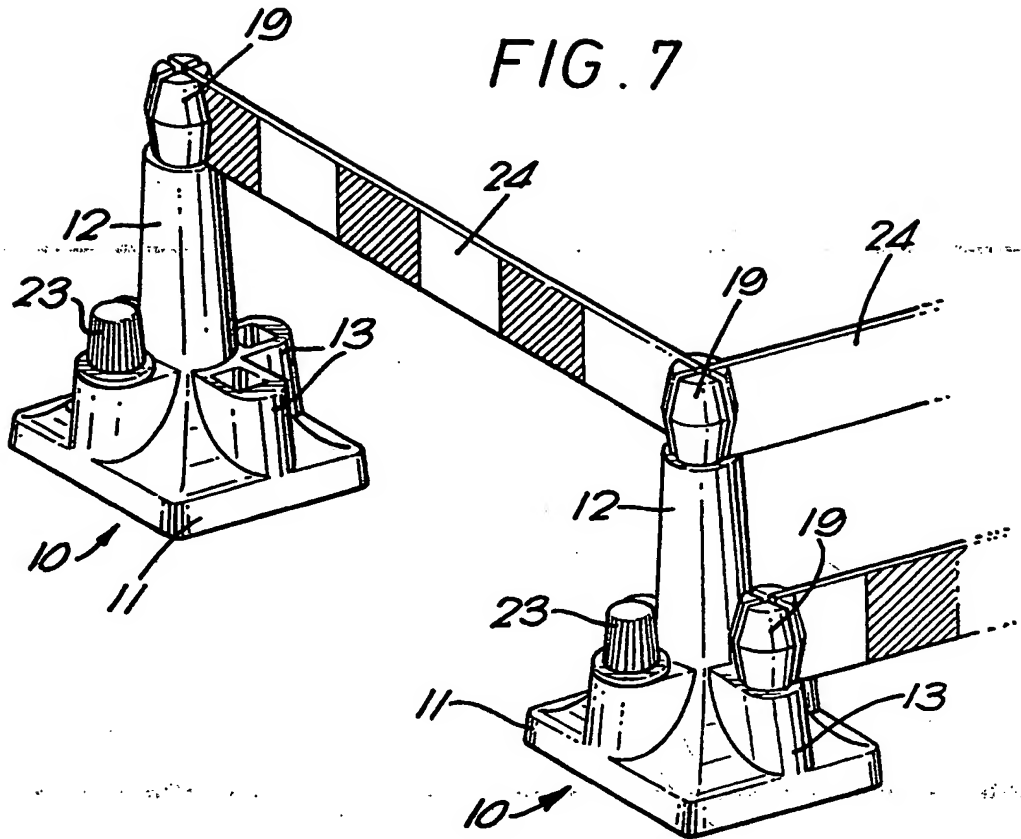


FIG. 8

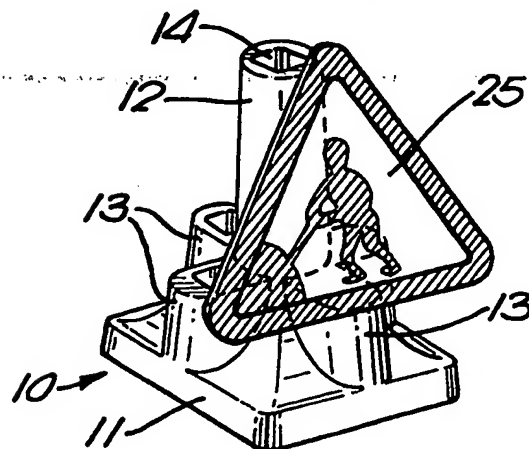


FIG. 9

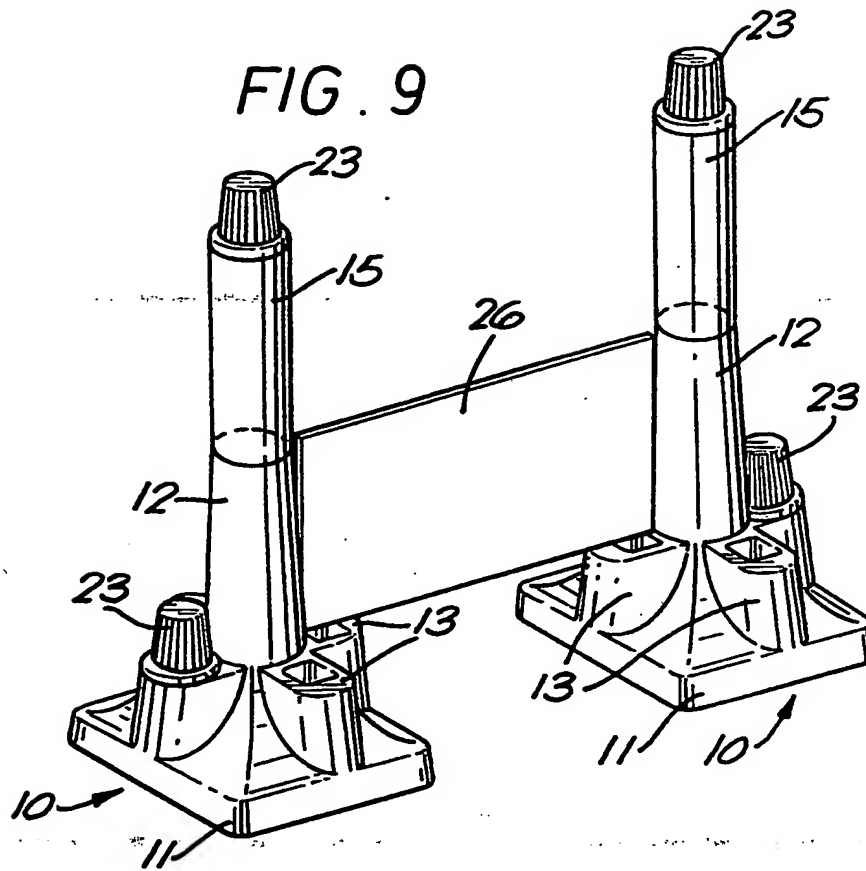
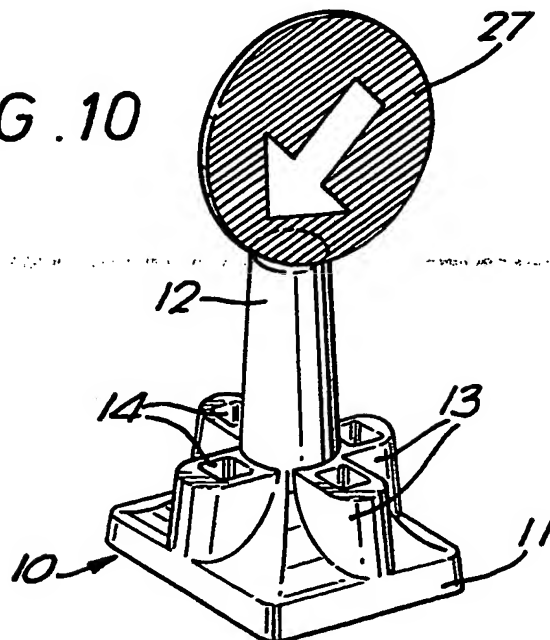
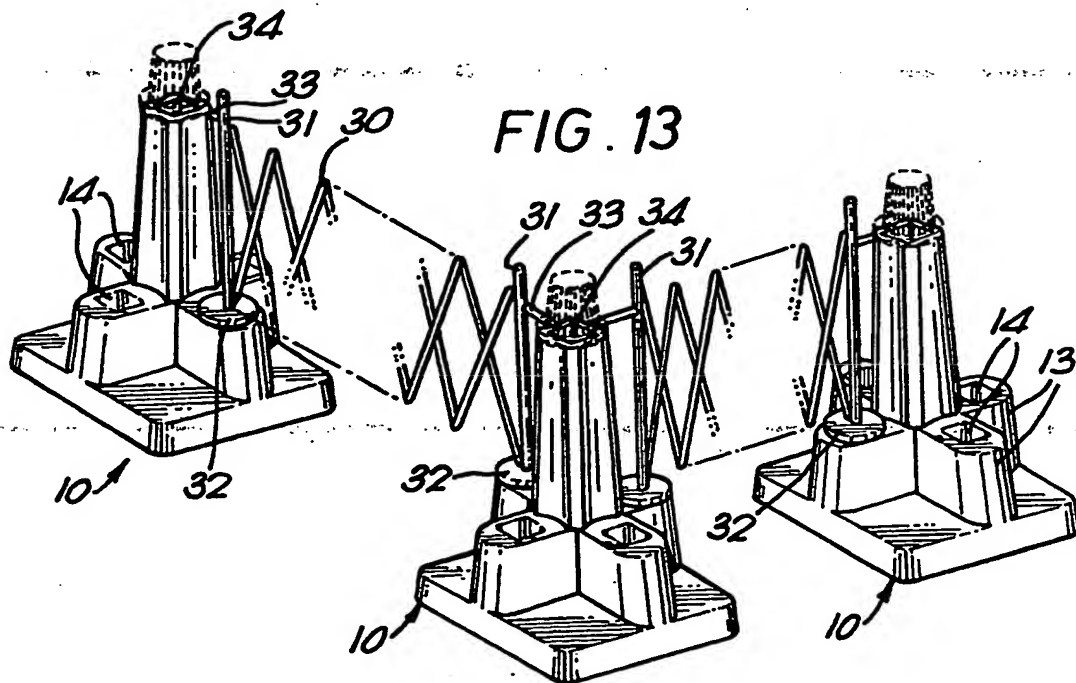
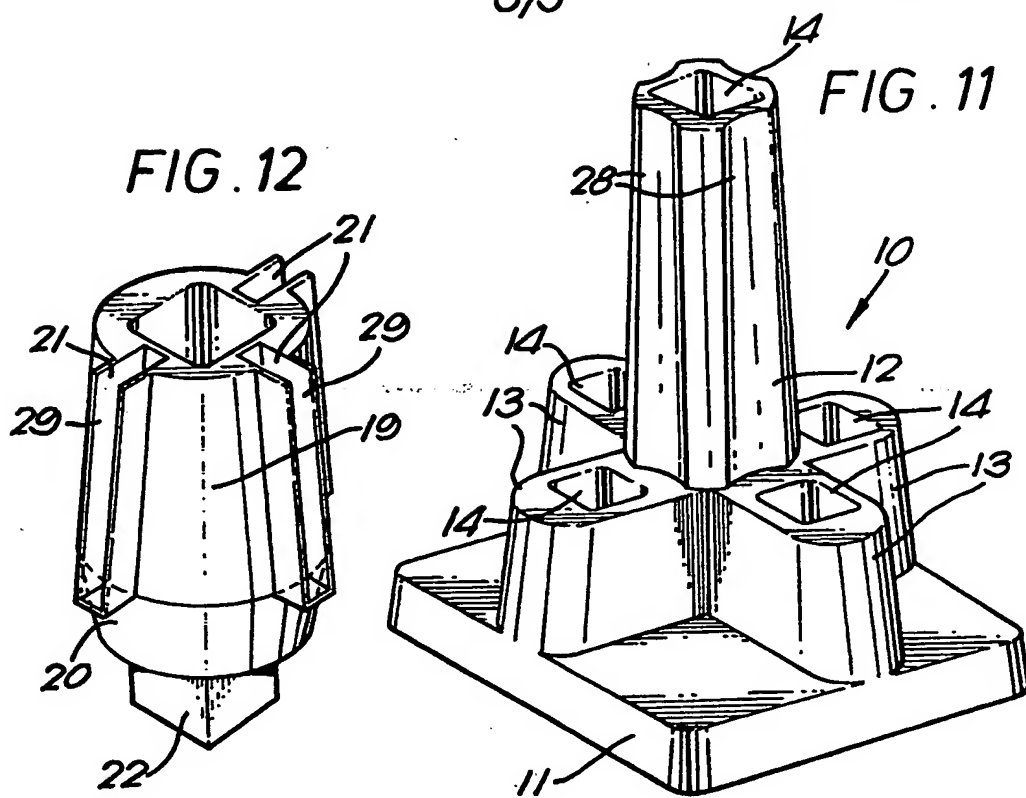


FIG. 10





PORTABLE WARNING OR INDICATING SYSTEM AND MEMBER

This invention relates to a portable warning or indicating system and to a portable warning or indicating member.

It is known to warn of or indicate to drivers of vehicles and to pedestrians any obstruction which lies in their path and this is usually done by placing conical members generally known as "cones" at strategic locations. During the hours of darkness it is known to hang warning lamps on the cones or on vertical support rods. It is also known to place direction indicators or signs near to the obstruction. However, such cones are not suitable for supporting warning lamps and can easily be knocked or blown over. The use of support rods for lamps is not always convenient as they have to be driven into the ground or road surface, and direction indicators or signs are usually supported on a tri-pod support and they are susceptible to being knocked or blown over.

There is a need for a portable warning or marking system which is versatile and which has a number of standard components.

According to the present invention in one aspect there is provided a portable warning or indicating system comprising a main member having a base portion, a first portion upstanding from said base portion, and at least one further upstanding portion adjacent to said first portion and of a height less than that of said first portion, at least the upper end portion of said first and further portions being hollow, and accessories which can be mounted on said upper end portions.

According to the present invention there in another aspect there is provided a portable warning or indicating member, comprising a base portion, a first portion upstanding from said base portion, and at least one further upstanding portion adjacent to said first portion and of a height less than that of said first portion, at least the upper end portion of said first and further portions being hollow for mounting accessories on the upper end portions.

Preferably the first upstanding portion is frusto-conical and the or each further upstanding portion extends outwardly from the bottom end portion of the frusto-conical portion.

An embodiment of the invention will now be described, by way of an example, with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of a portable warning or indicating member embodying the invention and which forms a main member of a warning or indicating system according to the invention.

Figure 2 is a perspective view of a tubular extension member which can be mounted on the main member of Figure 1,

Figure 3 is a perspective view of a lamp which can be mounted on the main member of Figure 1,

Figure 4 is a perspective view of a barrier support which can be mounted on the main member of Figure 1,

Figure 5 is a perspective view of another form of lamp which can be mounted on the main member of Figure 1,

Figure 6 is a perspective view of three main members as shown in Figure 1 placed side-by-side

Figure 7 is a perspective view of a barrier formed by main members as shown in Figure 1 and barrier supports,

Figure 8 is perspective view of a main member of Figure 1 supporting a warning triangle,

Figure 9 is a perspective view of two spaced apart main members of Figure 1 supporting a notice between them,

Figure 10 is a perspective view of a main member of Figure 1 supporting a direction indicator.

Figure 11 is a perspective view of another embodiment of a portable main member,

Figure 12 is another embodiment of a barrier support, and

Figure 13 is a perspective view of a barrier formed by main members and expandable barrier members.

The portable warning or indicating member 10 shown in Figure 1 comprises a base portion 11, an upstanding frusto-conical portion 12 and a plurality of upstanding portions 13 which are located adjacent to the upstanding portion 12 and extend outwardly from the bottom end portion of the upstanding portion 12. The upstanding portions 13 have a height which is less than that of the upstanding portion 12. Four upstanding portions 13 are shown which are symmetrically disposed around the upstanding portion 12, but it will be appreciated that less than four portions 13 can be provided, or more than four portions 13 may be provided.

The upper ends of the portions 12 and 13 are provided with a recess defining a hollow space 14 of rectangular cross-section. Alternatively, the portions 12 and 13 are hollow throughout their length and the base portion 11 is preferably hollow and provided with flanges for supporting weights, such as bags containing sand or other suitable material.

The base portion 11, upstanding portion 12 and the or each upstanding portion 13 are integrally formed of plastics material. The base portion 11 may be weighted by weights moulded into the plastics material.

The hollow spaces 14 may have any desired cross-section. The base portion 11 is shown as being rectangular in plan view but it can be circular or of any other desired shape. A sleeve having a fluorescent material on its outer side may be placed on the upstanding portion 12.

A number of different accessories can be mounted on the member 10. Figure 2 shows an accessory in the form of an extension member 15 which can be mounted on the upstanding portion 12 or on the or an upstanding portion 13. The extension member 15 has at one end a reduced portion 16 which fits into the appropriate hollow space 14 and at its other end the extension member has a recess defining a hollow space 16. The extension member 15 may be hollow along its entire length.

Figure 3 shows an accessory in the form of a circular lamp 17 which can be mounted on the member 10 or on an extension member 15. The lamp 17 has a battery holding portion 18 which is rectangular and which can be received in a hollow space 14 or a hollow space 16.

Figure 4 shows an accessory in the form of a barrier support 19 which comprises a head portion 20 provided with slots 21 and extending below the portion 20 is a rectangular portion 22 which can be received in a hollow space 14 or hollow space 16.

Figure 5 shows a different form of lamp 23 having a rectangular battery case which can be received in a hollow space 14 or 16.

Figure 6 illustrates a plurality of members 10, one being provided with an extension member 15 supporting a lamp 17 and the other members 10 being provided each with a lamp 23 supported on upstanding portions 13. A row of such an arrangement of members can be used to mark out contra-flow systems on motorways for example.

Figure 7 shows how a barrier can be erected utilizing members 10 supporting barrier supports 19 between which extend barrier boards 24, and

a barrier support 19 is provided on a portion 13. A member 10 can also be used for supporting a warning triangle 25 as shown in Figure 8. The triangle 25 being provided with a rectangular portion (not shown) received in a hollow space 14 or 16.

5 Figure 9 shows that two spaced apart members 10 can be used for supporting a sign 26 extending between them, the members 10 being provided with extension members 15 and lamps 23. The sign 26 may be formed of a material which will allow the sign to be rolled or folded when not in use.

10 Figure 10 shows a circular direction sign 27 mounted on an upstanding portion 12 of a member 10, the sign 27 being provided with a rectangular portion received in a hollow space 14.

15 It will be appreciated that a warning or marking system can be constructed using any combination of parts described carried on members 10.

The upstanding portions 12 and 13 may have light reflectors mounted on them.

20 Figure 11 shows another embodiment of a main member 10 in which the portion 12 is provided with longitudinally extending recesses or flutes 28.

An alternative form of barrier support 19 is shown in Figure 12, the support 19 being hollow or having a recess at its upper end and the slots 21 are provided on the outer surface and formed by channel portions 29.

25 Figure 13 shows a barrier formed by spaced apart members 10 supporting expandable barrier members 30 which at each end have a post 31 provided at the bottom end with a foot 32 which is received in a hollow space 14 and provided at the upper end with an arm 33 which at its free end is provided with a hole 34 which is aligned with a hollow space 14 of a portion 12 of a member 10.

CLAIMS

1. A portable warning or indicating system comprising a main member having a base portion, a first portion upstanding from said base portion, and at least one further upstanding portion adjacent to said first portion and of a height less than that of said first portion, at least the upper end portion of said first and further portions being hollow, and accessories which can be mounted on said upper end portions.
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2. A portable warning or indicating system as claimed in claim 1, in which the first upstanding portion is frusto-conical and the or each further upstanding portion extend outwardly from the bottom end portion of the frusto-conical portion.
10
3. A portable warning or indicating system as claimed in claim 1 or claim 2, in which the hollow end portions define a space of rectangular cross-section
15
4. A portable warning or indicating system as claimed in any preceding claims, in which said base portion, first upstanding portion and the or each further upstanding portion is hollow.
20
5. A portable warning or indicating system in which the portions forming the main member are integrally formed.
6. A portable warning or indicating system as claimed in any preceding claim, in which said accessories comprise at least a warning lamp, an extension tube, a rail holder, a light reflector and a visual sign member, each provided with a portion which can be received in a said hollow upper end portion for mounting the accessory thereon.
25
7. A portable warning or indicating member, comprising a base portion, a first portion upstanding from said base portion, and at least one further upstanding portion adjacent to said first portion and of a height less than
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that of said first portion, at least the upper end portion of said first and further portions being hollow for mounting accessories on the upper end portions.

5 8. A portable warning or indicating member as claimed in claim 7, in which the outer surface of the first portion is provided with longitudinally extending recesses or flutes.

10 9. A portable warning or indicating member as claimed in claim 7 or claim 8, in which the first upstanding portion is frusto-conical and the or each further upstanding portion extend outwardly from the bottom end portions of the frusto-conical portion.

15 10. A portable warning or indicating system as claimed in any one of claims 7 to 9, in which the hollow end portions define a space of rectangular cross-section.

20 11. A portable warning or indicating member as claimed in any one of claims 7 to 10, in which said base portion, first upstanding portion and the or each further upstanding portions are hollow.

12. A portable warning or indicating member as claimed in any one of claims 7 to 11, in which the portions are integrally formed.

25 13. A portable warning or indicating system substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

30 14. A portable warning or indicating member substantially as hereinbefore described with reference to and as illustrated in figures 1 or 6 to 10 or Figure 11 of the accompanying drawings.